

DP-305003

IN THE SPECIFICATION

Page 4, line 19, please insert the following paragraph:

Fig. 11 is a partial side view of a catalytic converter with an oxygen sensor disposed through the double walled endcone.

Please amend Page 5, after line 4 and before line 5, as amended in the Response dated May 20, 2005, as follows:

The exhaust system comprises a catalytic converter unit, a bushing element provided in a shell wall of the catalytic converter unit, and an oxygen sensor positioned within exhaust flow of the catalytic converter unit and extending through the bushing element and having a connector disposed in intimate contact with the bushing element. In a preferred arrangement, a bushing element is provided in a housing wall of an endcone of a catalytic converter, and an oxygen sensor having a connector is disposed in intimate contact with said bushing element to thereby mount the sensor in the exhaust flow. By mounting the oxygen sensor through the catalytic converter endcone, the sensor no longer extends radially out from the centerline of the exhaust flow, but rather is positioned at an angle to the centerline of the exhaust component (e.g., at an angle less than 90 degrees) and, accordingly, facilitates packaging the system underneath a vehicle.

Please amend Page 5, lines 15 – 24, as follows:

The rotated bit may then be indexed down such that substantially complete penetration of the component outer wall material is effected. Although in Figures 1-7, a single wall arrangement is depicted, in a double wall arrangement (as shown in Figure 11), the rotated bit will be indexed down and proceed to penetrate an inner wall in the same manner as illustrated with outer wall 12. Preferably, as depicted in ~~Figure 10~~ Figures 10 and 11, the extruded skirt material formed when penetrating the outer wall 12 merges with the upset material formed when penetrating the inner wall 13, so as to result in a continuous connection between the two walls, that can be tapped to accept a threaded connector 19 of an oxygen sensor 18.

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Please amend Page 6, lines 3 – 11, as follows:

The surface geometry of the collar surface, in any case, should conform to the geometry of the oxygen sensor to be mounted. If, for instance the sealing surface of the oxygen sensor is flat, the collar surface should be flat, while if the sealing surface of the oxygen sensor is beveled, the collar surface should be beveled. Otherwise, either where the geometries differ between the sensor mount and the collar surface, or where the rotated bit is not indexed down to completion such that the collar surface shapes the upset material appropriately, some additional means of sealing, such as a gasket 36 (see Figure 11), should be employed to ensure the integrity of the seal.

Please amend Page 8, lines 11 – 18, as follows:

A rotated bit was utilized to form an integral bushing on a North American trapezoid catalytic converter endcone assembly 30 (shown in Figure 8). The North American trapezoid endcone assembly 30, which consists of an outer surface material, an inner cone 40, and a mat material 38 therebetween (see Figure 11), was fabricated with a precut, 25 mm hole 42 located in the inner end cone 40 and through the mat material 38. The path of the rotated bit being cleared below, bushing formation was performed in the top side of the end cone 30 on the surface of the outer cone.